DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 1.28

WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-014386
Date Inspected: 25-May-2010

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: American Bridge/Fluor Enterprises, a JV

OSM Arrival Time: 1000
OSM Departure Time: 1830
Location: Job Site

CWI Name: Jim Cunningham and William Sherwood

CWI Present:	☑ Yes	☐ No					
Inspected CWI report:	☐ Yes	☑ No	☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No	☐ N/A
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No	☐ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☐ Yes	☑ No	☐ N/A
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Approved WPS:**	☑ Yes	☐ No	☐ N/A
				Delayed / Cancelled:	☐ Yes	☑ No	☐ N/A

Bridge No: 34-0006
Component: Orthotropic Box Girder

Summary of Items Observed:

Caltrans Office of Structural Material (OSM) Quality Assurance Inspector (QAI) Joselito Lizardo was present at the Self Anchored Suspension (SAS) job site as requested to perform observations on the welding of components for the San Francisco Oakland Bay Bridge (SFOBB) Project.

QA randomly observed ABF/JV qualified welders Rory Hogan (ID #3186) perform CJP groove (splice) back welding fill pass on Orthotropic Box Girder (OBG) L2W/L3W side plate 'E' outside. The welder was observed back welding in the 4G (overhead) position utilizing a dual shield Flux Cored Arc Welding (FCAW-G) with E71T-1M, 1/16" diameter wire electrode and implementing Caltrans approved Welding Procedure Specification (WPS) ABF-WPS-D15-3110-4. The welder was using a track mounted welder holder assembly that is remotely controlled. The joint being welded has the backing bar gouged using the Esab Plasma Arc machine and was ground smooth. The gouged and ground splice butt joint was also Non Destructive Testing (NDT) tested using the Magnetic Particle Testing (MT). The splice joint was preheated and maintained to greater than 150 degree Fahrenheit using Miller Proheat 35 Induction Heating System located at the other side of the plate prior/during welding. The vicinity was also properly protected from wind and other climatic conditions. During welding, ABF Quality Control (QC) Jim Cunningham was noted monitoring the welding parameters of the welder.

During the shift, rain water drifted to the opposite side of the plate where they were welding. The rain water sipped thru the bolt holes of the deck plates and drifted to the plate. Upon learning of the situation, Superintendent Dan Ieraci stopped the welding operation and blocked all the water that was going to the plate. After seeing the water stopped from drifting to the plate, the preheat was checked by QC Jim Cunningham to the required temperature before the welders resumed their operation.

At OBG L5E/L6E top deck plate ‘A’ outside, QA observed ABF welder Mike Maday perform Shielded Metal Welding (SMAW) using a 1/8” diameter electrode E7018H4R electrode on the low spots/underfill of weld cover reinforcement. The welding was monitored by ABF QC William Sherwood. On the opposite side of the same splice butt joint (inside), ABF QC Steven Mc Connell was noted performing Magnetic Particle Testing (MT) on the temporary welded attachments removal. Results of the MT made on the attachments removal appear satisfactory.

At OBG L2E/L3E side plate ‘E’ inside, QA randomly observed ABF/JV qualified welder Jordan Hazelaar perform CJP groove welding repair. The welder was observed welding in the 3G (vertical) position utilizing Shielded metal Arc Welding (SMAW) with 1/8” diameter E7018H4R electrode implementing welding procedure ABF-WPS-D15-1000-Repairs. The repair excavation having a dimension of 30mm long X 15mm wide X 5mm deep was preheated to more than 140 degree Fahrenheit using propane gas torch prior welding. During the shift, ABF QC Bonifacio Daquinag was noted monitoring the welder. Prior welding, ABF QC Bonifacio Daquinag was also observed performing Magnetic Particle Testing (MT) using Parker Contour Probe with red magnetic powder as detecting media on the repair excavation. During the shift, the welder has completed welding the repair.

At L2W/L3W side plates ‘C’ outside, this QA performed 10% Magnetic Particle Testing (MT) on the flush ground weld cover reinforcement of the splice butt joint. QA used a Parker Contour Probe electromagnetic yoke with red magnetic powder as detecting media. QA found no significant indications during the test.

WELDING INSPECTION REPORT

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Summary of Conversations:

As stated above.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact SMR Mohammad Fatemi (916) 227-5298, who represents the Office of Structural Materials for your project.

Inspected By:	Lizardo,Joselito	Quality Assurance Inspector
Reviewed By:	Levell,Bill	QA Reviewer